

Friday, June 21, 2019

Attn: Ms. Jennifer Atkins AECOM 250 Apollo Drive Chelmsford, MA 01824

Project ID: GULF CHELSEA TERMINAL 60597375-0500

**SDG ID:** GCD34888

Sample ID#s: CD34888 - CD34890

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis/Shiller

**Laboratory Director** 

NELAC - #NY11301 CT Lab Registration #PH-0618 MA Lab Registration #M-CT007 ME Lab Registration #CT-007 NH Lab Registration #213693-A,B NJ Lab Registration #CT-003 NY Lab Registration #11301 PA Lab Registration #68-03530 RI Lab Registration #63 UT Lab Registration #CT00007 VT Lab Registration #VT11301



587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045 Tel. (860) 645-1102 Fax (860) 645-0823

# Sample Id Cross Reference

June 21, 2019

SDG I.D.: GCD34888

Project ID: GULF CHELSEA TERMINAL 60597375-0500

| Client Id    | Lab Id  | Matrix        |
|--------------|---------|---------------|
| OUTFALL 003  | CD34888 | SURFACE WATER |
| TRIP BLANK 1 | CD34889 | SURFACE WATER |
| TRIP BLANK 2 | CD34890 | SURFACE WATER |



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**Analysis Report** 

June 21, 2019

FOR: Attn: Ms. Jennifer Atkins

AECOM

250 Apollo Drive

Chelmsford, MA 01824

Sample InformationCustody InformationDateTimeMatrix:SURFACE WATERCollected by:06/13/1913:55Location Code:AECOME-GULFReceived by:B06/14/1915:36

Rush Request: Standard Analyzed by: see "By" below

P.O.#: Laboratory Data

SDG ID: GCD34888

Phoenix ID: CD34888

Project ID: GULF CHELSEA TERMINAL 60597375-0500

Client ID: OUTFALL 003

|                             |                  | RL/  |          |          |                     |                  |
|-----------------------------|------------------|------|----------|----------|---------------------|------------------|
| Parameter                   | Result           | PQL  | Units    | Dilution | Date/Time By        | Reference        |
| Oil and Grease by EPA 1664A | < 1.4            | 1.4  | mg/L     | 1        | 06/20/19 MS         | F E1664A         |
| рН                          | 7.88             | 1.00 | pH Units | 1        | 06/15/19 03:48 RR/I | EG SM4500-H B-11 |
| Total Suspended Solids      | 51               | 5.0  | mg/L     | 1        | 06/17/19 BMD/       | BJA SM2540D-11   |
| Semi-Volatile Extraction    | Completed        |      |          |          | 06/17/19 S/I        | O SW3520C        |
| Aromatic Volatiles w/Na     | <u>apthalene</u> |      |          |          |                     |                  |
| Benzene                     | ND               | 1.0  | ug/L     | 1        | 06/14/19 MH         | H E624.1         |
| Naphthalene                 | ND               | 1.0  | ug/L     | ug/L 1   |                     | H E624.1         |
| QA/QC Surrogates            |                  |      |          |          |                     |                  |
| % 1,2-dichlorobenzene-d4    | 101              |      | %        | 1        | 06/14/19 MH         | H 70 - 130 %     |
| % Bromofluorobenzene        | 96               |      | %        | 1        | 06/14/19 MH         | H 70 - 130 %     |
| % Dibromofluoromethane      | 99               |      | %        | 1        | 06/14/19 MI         | H 70 - 130 %     |
| % Toluene-d8                | 99               |      | %        | 1        | 06/14/19 Mi         | H 70 - 130 %     |
| Semivolatiles by SIM, P     | <u>AH</u>        |      |          |          |                     |                  |
| Benzo(a)pyrene              | ND               | 0.10 | ug/L     | 1        | 06/19/19 WI         | B E625.1         |
| Naphthalene                 | ND               | 0.49 | ug/L     | 1        | 06/19/19 WI         | B E625.1         |
| QA/QC Surrogates            |                  |      |          |          |                     |                  |
| % 2-Fluorobiphenyl          | 55               |      | %        | 1        | 06/19/19 WI         | 30 - 130 %       |
| % Nitrobenzene-d5           | 53               |      | %        | 1        | 06/19/19 WI         | 30 - 130 %       |
| % Terphenyl-d14             | 34               |      | %        | 1        | 06/19/19 WI         | 30 - 130 %       |

Project ID: GULF CHELSEA TERMINAL 60597375-0500

Client ID: OUTFALL 003

RL/

Parameter Result PQL Units Dilution Date/Time By Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time

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Phyllis Shiller, Laboratory Director

June 21, 2019

Reviewed and Released by: Rashmi Makol, Project Manager

Phoenix I.D.: CD34888



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**Analysis Report** 

June 21, 2019

FOR: Attn: Ms. Jennifer Atkins

**AECOM** 

250 Apollo Drive

Chelmsford, MA 01824

<u>Sample Information</u> <u>Custody Information</u> <u>Date</u> <u>Time</u>

Matrix: SURFACE WATER Collected by: 06/13/19

Location Code: AECOME-GULF Received by: B 06/14/19 15:36

Rush Request: Standard Analyzed by: see "By" below

P.O.#: 112185 Laboratory Data SDG ID: GCD34888

Phoenix ID: CD34889

Project ID: GULF CHELSEA TERMINAL 60597375-0500

Client ID: TRIP BLANK 1

RL/

| Parameter                       | Result | PQL | Units | Dilution | Date/Time | Ву | Reference  |  |  |  |  |  |  |  |
|---------------------------------|--------|-----|-------|----------|-----------|----|------------|--|--|--|--|--|--|--|
| Aromatic Volatiles w/Napthalene |        |     |       |          |           |    |            |  |  |  |  |  |  |  |
| Benzene                         | ND     | 1.0 | ug/L  | 1        | 06/14/19  | МН | E624.1     |  |  |  |  |  |  |  |
| Naphthalene                     | ND     | 1.0 | ug/L  | 1        | 06/14/19  | MH | E624.1     |  |  |  |  |  |  |  |
| QA/QC Surrogates                |        |     |       |          |           |    |            |  |  |  |  |  |  |  |
| % 1,2-dichlorobenzene-d4        | 102    |     | %     | 1        | 06/14/19  | MH | 70 - 130 % |  |  |  |  |  |  |  |
| % Bromofluorobenzene            | 93     |     | %     | 1        | 06/14/19  | MH | 70 - 130 % |  |  |  |  |  |  |  |
| % Dibromofluoromethane          | 103    |     | %     | 1        | 06/14/19  | MH | 70 - 130 % |  |  |  |  |  |  |  |
| % Toluene-d8                    | 101    |     | %     | 1        | 06/14/19  | МН | 70 - 130 % |  |  |  |  |  |  |  |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

#### TRIP BLANK INCLUDED.

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Phyllis Shiller, Laboratory Director

June 21, 2019

Reviewed and Released by: Rashmi Makol, Project Manager



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**Analysis Report** 

June 21, 2019

FOR: Attn: Ms. Jennifer Atkins

**AECOM** 

250 Apollo Drive

Chelmsford, MA 01824

<u>Sample Information</u> <u>Custody Information</u> <u>Date</u> <u>Time</u>

Matrix: SURFACE WATER Collected by: 06/13/19

Location Code: AECOME-GULF Received by: B 06/14/19 15:36

Rush Request: Standard Analyzed by: see "By" below

P.O.#: 112185 Laboratory Data SDG ID: GCD34888

Phoenix ID: CD34890

Project ID: GULF CHELSEA TERMINAL 60597375-0500

Client ID: TRIP BLANK 2

RL/

| Parameter                       | Result | PQL | Units | Dilution | Date/Time | Ву | Reference  |  |  |  |  |  |
|---------------------------------|--------|-----|-------|----------|-----------|----|------------|--|--|--|--|--|
| Aromatic Volatiles w/Napthalene |        |     |       |          |           |    |            |  |  |  |  |  |
| Benzene                         | ND     | 1.0 | ug/L  | 1        | 06/14/19  | МН | E624.1     |  |  |  |  |  |
| Naphthalene                     | ND     | 1.0 | ug/L  | 1        | 06/14/19  | МН | E624.1     |  |  |  |  |  |
| QA/QC Surrogates                |        |     |       |          |           |    |            |  |  |  |  |  |
| % 1,2-dichlorobenzene-d4        | 99     |     | %     | 1        | 06/14/19  | MH | 70 - 130 % |  |  |  |  |  |
| % Bromofluorobenzene            | 91     |     | %     | 1        | 06/14/19  | MH | 70 - 130 % |  |  |  |  |  |
| % Dibromofluoromethane          | 102    |     | %     | 1        | 06/14/19  | MH | 70 - 130 % |  |  |  |  |  |
| % Toluene-d8                    | 101    |     | %     | 1        | 06/14/19  | МН | 70 - 130 % |  |  |  |  |  |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

#### **Comments:**

#### TRIP BLANK INCLUDED.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

June 21, 2019

Reviewed and Released by: Rashmi Makol, Project Manager



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# QA/QC Report

June 21, 2019

Oil and Grease by EPA 1664A

**Total Suspended Solids** 

Parameter

Comment:

рΗ

### QA/QC Data

0.20

6.14

99.1

SDG I.D.: GCD34888 % Sample Dup Dup LCS LCSD LCS MS MSD MS Rec RPD % % Result Result RPD % RPD % **RPD** Limits Limits QA/QC Batch 484284 (mg/L), QC Sample No: CD34319 (CD34888) 85 - 115 20 96.0 97.0 1.0 QA/QC Batch 483677 (mg/L), QC Sample No: CD34576 (CD34888) 85 - 115 < 5.0 < 5.0 NC 100

85 - 115

20

Comment: Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.

QA/QC Batch 483660 (pH), QC Sample No: CD34868 (CD34888)

Blk

1.4

5.0

6.13

Blank RL

BRL

A Blank spike was performed instead of a matrix spike

Additional: MS acceptance range 75-125%.



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## QA/QC Report

June 21, 2019

### QA/QC Data

<u>Pata</u> SDG I.D.: GCD34888

| Parameter                                 | Blank  | Blk<br>RL | LCS<br>% | LCSD<br>% | LCS<br>RPD | MS<br>% | MSD<br>% | MS<br>RPD | Rec<br>Limits | RPD<br>Limits |  |  |  |  |  |
|---|--|-----------|----------|-----------|------------|---------|----------|-----------|---------------|---------------|--|--|--|--|--|
| QA/QC Batch 483640 (ug                    | QA/QC Batch 483640 (ug/L), QC Sample No: CD34888 (CD34888) |           |          |           |            |         |          |           |               |               |  |  |  |  |  |
| Semivolatiles by SIM, PAH - Surface Water |  |           |          |           |            |         |          |           |               |               |  |  |  |  |  |
| Benzo(a)pyrene                            | ND   | 0.02      | 67       | 74        | 9.9        |         |          |           | 30 - 130      | 20            |  |  |  |  |  |
| Naphthalene                               | ND   | 0.50      | 50       | 52        | 3.9        |         |          |           | 30 - 130      | 20            |  |  |  |  |  |
| % 2-Fluorobiphenyl                        | 58   | %         | 55       | 56        | 1.8        |         |          |           | 30 - 130      | 20            |  |  |  |  |  |
| % Nitrobenzene-d5                         | 55   | %         | 55       | 55        | 0.0        |         |          |           | 30 - 130      | 20            |  |  |  |  |  |
| % Terphenyl-d14                           | 65   | %         | 64       | 66        | 3.1        |         |          |           | 30 - 130      | 20            |  |  |  |  |  |
| Comment:                                  |  |           |          |           |            |         |          |           |               |               |  |  |  |  |  |

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 483682 (ug/L), QC Sample No: CD34889 (CD34888, CD34889, CD34890)

#### Volatiles - Surface Water

| Benzene                  | ND  | 0.70 | 90  | 85  | 5.7 | 83  | 93  | 11.4 | 65 - 135 | 20 |
|--------------------------|-----|------|-----|-----|-----|-----|-----|------|----------|----|
| Naphthalene              | ND  | 1.0  | 103 | 98  | 5.0 | 95  | 107 | 11.9 | 70 - 130 | 30 |
| % 1,2-dichlorobenzene-d4 | 100 | %    | 101 | 101 | 0.0 | 101 | 101 | 0.0  | 70 - 130 | 30 |
| % Bromofluorobenzene     | 95  | %    | 105 | 104 | 1.0 | 104 | 104 | 0.0  | 70 - 130 | 30 |
| % Dibromofluoromethane   | 99  | %    | 101 | 104 | 2.9 | 101 | 106 | 4.8  | 70 - 130 | 30 |
| % Toluene-d8             | 100 | %    | 98  | 100 | 2.0 | 99  | 99  | 0.0  | 70 - 130 | 30 |
| Comment:                 |     |      |     |     |     |     |     |      |          |    |

A blank MS/MSD was analyzed with this batch.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

NC - No Criteria

Intf - Interference

Phyllis/Shiller, Laboratory Director

June 21, 2019

Friday, June 21, 2019

Sample Criteria Exceedances Report GCD34888 - AECOME-GULF

Criteria: None State: MA

State: MA

RL Analysis
SampNo Acode Phoenix Analyte Criteria Units

Result RL Criteria Units

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

<sup>\*\*\*</sup> No Data to Display \*\*\*



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# **Analysis Comments**

June 21, 2019 SDG I.D.: GCD34888

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

|                       |                         |  |                                    |  | _                          |                      |                    |                               | _                      | , ,  |  | _   |             | <del></del>  | <u> </u>    |  | <br> | <br> | <br> | _                | ·  | -                |  |                             |   |                                     | _ |
|-----------------------|-------------------------|--|------------------------------------|--|----------------------------|----------------------|--------------------|-------------------------------|------------------------|--|--|---|-------------|--------------|-------------|--|------|------|------|------------------|--|------------------|--|-----------------------------|---|-------------------------------------|---|
| Coolant: IPK O ICE No | Temp ( % c Pg of        |  | * Email: jennifer.atkins@aecom.com | Project P.O: 112185                            | This section MUST be       | completed with       | Bottle Quantities. |                               | I I I I OCK            | (1606) 14 14 14 14 14 14 14 14 14 14 14 14 14  | Though the state of the state o | 607 111 02  | 3 3 1       |              |             |  |      |      |      | اق               |  | GW-2 GS/Key      |  |                             | S-3 ☐ Full Data Package* ☐ MWRA eSMART ☐ Phoenix Std Report ☐ Other ☐ Other | MA S                                |   |
|                       | RECORD                  |  |                                    | Project: Gulf Chelsea Terminal / 60597375-0500 | ıtkins                     |                      |                    |                               |                        |  |  |   |             |              |             |  |      |      |      | OIL<br>L         | (Residential)  | GW SW Protection | <u>] [</u>                                     | GB Mobility Residential DEC | ☐ I/C DEC<br>☐ Other  | State where samples were collected: |   |
|                       | CHAIN OF CUSTODY RECORD | ddle Turnpike, P.O. Box 37<br>info@phoenixlabs.com | Cilent Services (860) 645-8726     | Project: Gulf Chelsea                          | Report to: Jennifer Atkins | Invoice to: AECOM    | QUOTE # AE012319RM |                               |                        | - Kequest  | INOMINO  | Suco it is so | ×           |              |             |  |      |      |      | Date: Time:      | 1011116 1521   | 900              |  | Turnaround:                 | 2 Days*   | E APPLIES                           |   |
|                       |                         | Inc.   |                                    |  |                            |                      |                    | - Montification               |                        | rface Water www=Waste Water<br>oil SD=Solid w=Wibe OIL=Oil   |  | Sample Date Time                                  | 1 6-13-19   |              |             |  |      |      |      |                  | 6-1449 (1:3  | 400000           | 18:  |                             |   |                                     |   |
|                       |                         | FHOEINIX Environmental Laboratories,               | ı                                  | ·  | 250 Apollo Drive           | Chelmsford, MA 01824 | Jennifer Atkins    | Client Sample - Information - | and a                  | Matrix Code: Watch | ,  | Customer Sample Identification                    | Outfall 003 | Trip Black 1 | Try Black 2 |  |      |      |      | by/ Accepted by: | A STATE OF THE STA |                  | Comments, Special Requirements or Regulations: |                             |   |                                     |   |
|                       |                         | Environ  |                                    | Customer:                                      | Address:                   |                      |                    |                               | Sampler's<br>Signature | Matrix Code:<br>DW=Drinking \\ RW=Raw \Wate  | 8=Bulk L=Liqu  | PHOENIX USE ONLY<br>SAMPLE #                      | 34888       | 34889        | 068hs       |  |      |      |      | Relinguished     | The state of the s |                  | omments, Spe                                   |                             |   |                                     |   |